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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,578	12/08/2000	Marcus Lowell Munger	MG-00077	4431

7590 09/11/2003
Carl M. Wright
646 Furman Way
Boulder, CO 80305-5614

EXAMINER

MAHMOUDI, HASSAN

ART UNIT PAPER NUMBER

2175

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/733,578

Applicant(s)

MUNGER, MARCUS LOWELL

Examiner

Tony Mahmoudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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TECHNOLOGY CENTER 2100

DETAILED ACTION

Remarks

1. In response to communications filed on 14-July-2003, claim 1 is cancelled and claims 2, 4, and 5 are amended per applicant's request. Therefore, claims 2-8 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drogin (U.S. patent No. 4,851,854) in view of Duluk, Jr. et al (U.S. patent No. 5,574,835.)

As to claim 2, Drogin teaches a method of assigning identifying indicia to objects (see column 3, line 61 through column 4, line 1, where "assigning identifying indicia" is read on "values of first and second parameters") in multidimensional space (see column 1, lines 23-26) comprising the steps of:

sorting objects initially according to a first dimension of their location in multi-dimensional space (see Abstract, and see column 1, lines 6-19);

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determining ambiguities among coordinate values of their location (see column 12, lines 35-42) in the multidimensional space according to whether separation of objects in a dimension is less than a predetermined threshold value (see column 8, lines 12-25); and

grouping subsets of objects (see column 11, lines 50-57.)

Drogin does not teach:

grouping objects according to ambiguities in the objects; and

ordering ambiguous objects in subsets according to other dimensions of the multidimensional space.

Duluk, Jr. et al teaches detection of hidden polygons in three-dimensional databases (see Abstract), in which he teaches grouping objects according to ambiguities in the objects (see column 16, lines 14-19, and see column 19, lines 24-33); and ordering ambiguous objects in subsets according to other dimensions of the multidimensional space (see column 21, lines 10-27.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Drogin to include grouping objects according to ambiguities in the objects; and ordering ambiguous objects in subsets according to other dimensions of the multidimensional space.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Drogin by the teachings of Duluk, Jr. et al because grouping objects according to ambiguities in the objects; and ordering ambiguous objects in subsets according to other dimensions of the multidimensional space, would allow objects with ambiguous cluster allocation to be separated and

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treated as individual entities either from the very beginning, or upon obtaining computational results .

As to claim 3, Drogin as modified teaches wherein the determining step includes the step of ascertaining a predetermined threshold value based on known errors of position measurements (see Drogin, column 6, lines 40-48, column 8, lines 20-25, and see column 10, lines 1-7.)

As to claim 4, Drogin as modified teaches the method including an initial step of: selecting as the first dimension of a multidimensional coordinate system that dimension along which separation of objects exhibits the greatest dispersion (see Drogin, column 13, lines 10-22.)

As to claim 5, Drogin as modified teaches wherein the grouping steps includes the step of determining ambiguities among coordinate values according to whether separation of targets is less than any of a plurality of predetermined threshold values (see Duluk, Jr. et al, Abstract, and see column 21, lines 9-38.)

As to claim 8, Drogin teaches a method of sorting indicia corresponding to objects (see Abstract, and see column 1, lines 6-19) moving through a multidimensional space (see column 1, lines 23-26) comprising the steps of:

scanning the multidimensional space to detect positions of objects therein (see column 1, lines 23-26, and see column 13, lines 10-22);

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assigning unique indicia to each detected object (see column 3, line 61 through column 4, line 1, where “assigning identifying indicia” is read on “values of first and second parameters”);

sorting assigned indicia along one coordinate axis of the multidimensional space (see Abstract, and see column 1, lines 6-19);

grouping into subsets (see column 11, lines 50-57.)

For the remaining steps of this claim, applicant is kindly directed to remarks and discussions made for claim 2 above.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drogin (U.S. patent No. 4,851,854) in view of Duluk, Jr. et al (U.S. patent No. 5,574,835), as applied to claims 2-5 and 8 above, and further in view of Miura et al (U.S. Patent No. 6,169,966.)

As to claim 6, Drogin as modified still does not teach wherein the determining step includes the step of ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other.

Miura et al teaches an apparatus for detecting a moving state of an object (see Abstract), in which he teaches ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other (see column 2, lines 17-38, and see column 3, line 49 through column 4, line 64.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Drogin as modified to include

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ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Drogin as modified, by the teaching of Miura et al, because ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other, would provide for the moving characteristic of the object to be determined by using the positional time-variations of the object, as taught by Miura et al (see column 2, lines 22-36.)

As to claim 7, Drogin as modified teaches wherein ascertaining one of the predetermined threshold values based on maximum rate of change of position of one object with respect to any other (see Miura et al, column 2, lines 17-38, and see column 3, line 49 through column 4, line 64); and

ascertaining another one of the predetermined threshold values based on the random errors of measurements in positions of the objects (see Drogin, column 6, lines 40-48, column 8, lines 20-25, and see column 10, lines 1-7.)

Response to Arguments

5. Applicant's arguments filed on 14-July-2003 with respect to claims 2-6 and 8 have been fully considered but they are moot in view of the new grounds for rejection.

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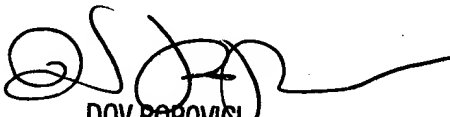
Conclusion

6. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

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August 25, 2003


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